Report on Site Visit to the National Institutes of Health
Mixed Waste Storage and Treatment Facility

Purpose, Location, and Participants

On June 26, 1998, members of the EPA mixed waste team conducted a site visit to the National Institutes of Health's (NIH) mixed waste treatment and storage facility to gather information concerning the generation, storage, and disposal of low-level mixed wastes. The facility is located in Bethesda, Maryland, and can be reached via route 355 off the Capital Beltway. Due to the proximity of the facility, the State of Maryland Department of the Environment and Federal contractors were invited.

The NIH is one of eight health agencies of the Public Health Service which, in turn, is part of the U.S. Department of Health and Human Services. Comprised of 24 separate Institutes, Centers, and Divisions, NIH has 75 buildings on more than 300 acres (see attached map).

Participants included:

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Waste Generation and Handling Practices

The tour began with an informative description of the operation of the facility, presented by the NIH representatives. Following the description, the representatives requested that any questions be posed in the conference room rather than during the visual tour of the facility. Having said that, a brief question and answer period took place.

As described by the representatives, NIH has approximately 3,000 laboratories that use radioactive material on a daily basis. A contractor (Safety-Kleen), is responsible for the management of the waste. No storage activities occur in the laboratories. On a daily basis, the mixed waste produced from the laboratories is removed. Once removed, it is transported to Buildings 21 and 26 T for mixed waste sampling and storage activities. These storage areas are restricted, and are only accessible to contractors and approved NIH personnel. There is constant surveillance in each laboratory, and all staff are required to have identification badges. The laboratories are clearly posted and require card keys for entering and exiting. The contractor is responsible for waste sampling, and transporting of the waste from each laboratory to the storage and sampling facilities (i.e, manifest tracking). In addition, the contractor is also responsible for preparing and transporting the waste to the selected treatment facility (e.g., Perma-Fix). If necessary, the contractor also provides emergency services for potential spills. The campus also has a full equipped fire station on the premises for incidents that require additional assistance.

During the tour, the mixed waste team was able to view, first hand, the mixed waste management practices by the contractors in Buildings 21 and 26T. First, the team entered the area of the facility where transportation, sampling and separation of mixed waste occur. After the waste is sampled and separated, it is packaged and stored, for no more than the required 90 days,

until final transportation for treatment occurs. Secondly, the team was escorted to Building 26T where it witnessed the presence of approximately 30 55-gallon drums ready for delivery to treatment facilities. Eight of those drums were still in the testing area and secured in pressurized bins. Entering and exiting each building, the team was checked for excess amounts of radioactive materials on the shoes by scanning the soles with a radio gamma-emitter. Also, each participant was provided safety glasses for protection.

NIH is a Federal Facility licensed directly by the Nuclear Regulatory Commission (NRC). Also, NIH is considered a Treatment Storage and Disposal (TSD) facility, and therefore, has a Resource Conservation Recovery Act (RCRA) Part B permit. According to the NIH representatives, the mixed wastes produced from the laboratories are characteristic of Class A low-level wastes. They are primarily liquid scintillation wastes, most under the .05µci/gm NRC requirement. Less than 50% of the waste meets the RCRA hazardous waste definition. In compliance with NRC regulations, once the wastes are sampled and stored, they are transported to a secure and monitored location. When possible, a small portion of mixed waste, typically organic aqueous waste, is treated on-site via ultraviolet treatment processes in Building 21. Generally, NIH transports its waste to Perma-fix at a cost of $150.00 to $350.00 a drum, depending on radionuclide level and concentration of hazardous waste. Approximately 320 drums are shipped annually. Typically shipment will occur approximately twice a month for radioactive waste and weekly for chemical waste.

Waste Minimization

NIH has a half -day training course that is offered at least once a month, and that covers procedures for the overall handling of radioactive and mixed waste. During the summer months it is offered more often due to increases in personnel, primarily interns. This course also covers mixed waste minimization. Approximately 7 million dollars a year are spent in waste minimization efforts.

Requested Regulatory Relief

The NIH representatives proposed that there may be some potential for regulatory relief for tritium. NIH's tritium amount is very low, but very difficult to dispose of due to regulatory requirements. Mr. Kovach said that EPA should not alter existing practices drastically. He believes that an increase or change in regulations may hurt rather than help the waste management practices currently implemented at NIH.

The National Institute of Health Campus